

FEB 05 1997

**SIGMA-ALDRICH**

SIGMA CHEMICAL COMPANY  
POST OFFICE BOX 14508  
SAINT LOUIS, MISSOURI 63178, USA

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DATE 01/23/97  
CUST#: 2-097-94804  
PO#: MCARD 01/22/97

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

SECTION 1. - - - - - CHEMICAL IDENTIFICATION - - - - -

CATALOG #: D9628  
NAME: L-3,4-DIHYDROXYPHENYLALANINE

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 59-92-7  
MF: C9H11NO4  
EC NO: 200-445-2

SYNONYMS

ALANINE, 3-(3,4-DIHYDROXYPHENYL)-, (-)- \* 2-AMINO-3-(3,4-DIHYDROXYPHENYL)PROPANOIC ACID \* BENDOPA \* BIODOPA \* BROCADOPA \* CEREPAP \* CIDANDOPA \* DA \* DEADOPA \* DIHYDROXY-L-PHENYLALANINE \* L-DIHYDROXYPHENYLALANINE \* (-)-3-(3,4-DIHYDROXYPHENYL)-L-ALANINE \* BETA-(3,4-DIHYDROXYPHENYL)-ALPHA-ALANINE \* L-ALPHA-DIHYDROXYPHENYLALANINE \* L-BETA-(3,4-DIHYDROXYPHENYL)ALANINE \* L-3,4-DIHYDROXYPHENYLALANINE \* L-3,4-DIHYDROXYPHENYL-ALPHA-ALANINE \* BETA-(3,4-DIHYDROXYPHENYL)-L-ALANINE \* 3-(3,4-DIHYDROXYPHENYL)-L-ALANINE \* 3,4-DIHYDROXYPHENYLALANINE \* (-)-3,4-DIHYDROXYPHENYLALANINE \* 3,4-DIHYDROXYPHENYL-L-ALANINE \* 3,4-DIHYDROXY-L-PHENYLALANINE \* (-)-DOPA \* DOPA \* L-DOPA \* DOPAFLEX \* DOPAL \* DOPAIDAN \* DOPAL-FHER \* DOPALINA \* DOPAR \* DOPARKINE \* DOPARL \* DOPASOL \* DOPASTON \* DOPASTRAL \* DOPRIN \* ELDOPAL \* ELDOPATEC \* EURODOPA \* HELFO DOPA \* L-O-HYDROXYTYROSINE \* 3-HYDROXY-L-TYROSINE \* INSULAMINA \* LARODOPA \* LEVODOPA \* LEVOPA \* MAIPEDOPA \* PARDA \* PARDOPA \* RO 4-6316 \* SOBIODOPA \* L-TYROSINE, 3-HYDROXY- (9CI) \* VELDOPA \*

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

HARMFUL  
HARMFUL IF SWALLOWED.  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
TARGET ORGAN(S):  
HEART  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.  
WEAR SUITABLE PROTECTIVE CLOTHING.

SECTION 4. - - - - - FIRST-AID MEASURES - - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.  
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.  
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.  
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.

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CATALOG #: D9628  
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CALL A PHYSICIAN.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA

WATER SPRAY.  
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES - - - - -

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.  
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.  
AVOID RAISING DUST.  
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - HANDLING AND STORAGE - - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -

CHEMICAL SAFETY GOGGLES.  
COMPATIBLE CHEMICAL-RESISTANT GLOVES.  
NIOSH/MSHA-APPROVED RESPIRATOR.  
SAFETY SHOWER AND EYE BATH.  
MECHANICAL EXHAUST REQUIRED.  
DO NOT BREATHE DUST.  
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.  
WASH THOROUGHLY AFTER HANDLING.  
IRRITANT.  
KEEP TIGHTLY CLOSED.  
AIR AND LIGHT SENSITIVE  
STORE IN A COOL DRY PLACE.

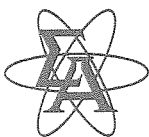
SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR  
WHITE POWDER

PHYSICAL PROPERTIES  
MELTING POINT: 295 C (DEC)

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -

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INCOMPATIBILITIES  
STRONG OXIDIZING AGENTS  
LIGHT SENSITIVE  
AIR SENSITIVE

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
TOXIC FUMES OF:  
CARBON MONOXIDE, CARBON DIOXIDE  
NITROGEN OXIDES

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -

ACUTE EFFECTS  
HARMFUL IF SWALLOWED.  
MAY BE HARMFUL IF INHALED.  
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.  
CAUSES EYE AND SKIN IRRITATION.  
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER  
RESPIRATORY TRACT.  
EXPOSURE CAN CAUSE:  
NAUSEA, HEADACHE AND VOMITING  
TARGET ORGAN(S):  
HEART

RTECS #: AY5600000  
ALANINE, 3-(3,4-DIHYDROXYPHENYL)-, L-

TOXICITY DATA		
ORL-RAT LD50:	1780 MG/KG	TXAPA9 28,1,74
IPR-RAT LD50:	624 MG/KG	TXAPA9 28,1,74
SCU-RAT LD50:	2 GM/KG	IYKEDH 3,186,72
IVN-RAT LD50:	>100 MG/KG	NIIRDN 6,905,82
ORL-MUS LD50:	2363 MG/KG	TXAPA9 28,1,74
IPR-MUS LD50:	588 MG/KG	TXAPA9 28,1,74
SCU-MUS LD50:	4449 MG/KG	IYKEDH 3,186,72
IVN-MUS LD50:	450 MG/KG	TXAPA9 28,1,74
ORL-RBT LD50:	609 MG/KG	TXAPA9 28,1,74
ORL-BWD LD50:	100 MG/KG	AECTCV 12,355,83

TARGET ORGAN DATA  
SENSE ORGANS AND SPECIAL SENSES (LACRIMATION)  
SENSE ORGANS AND SPECIAL SENSES (OTHER EYE EFFECTS)  
BEHAVIORAL (SOMNOLENCE)  
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)  
BEHAVIORAL (EXCITEMENT)  
BEHAVIORAL (ATAXIA)  
BEHAVIORAL (AGGRESSION)  
LUNGS, THORAX OR RESPIRATION (DYSPPNAE)  
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)  
GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY GLANDS)  
GASTROINTESTINAL (NAUSEA OR VOMITING)

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SKIN AND APPENDAGES (HAIR)  
MATERNAL EFFECTS (OVARIES, FALLOPIAN TUBES)  
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)  
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)  
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)  
SPECIFIC DEVELOPMENTAL ABNORMALITIES (OTHER DEVELOPMENTAL ABNORMALITIES)  
EFFECTS ON NEWBORN (PHYSICAL)  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
COMPLETE INFORMATION.

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A  
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.  
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - REGULATORY INFORMATION - - - - -

EUROPEAN INFORMATION

HARMFUL

R 22

HARMFUL IF SWALLOWED.

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.

S 36

WEAR SUITABLE PROTECTIVE CLOTHING.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

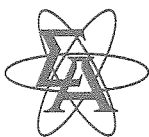
NOES 1983: HZD X3795; NIS 2; TNF 57; NOS 9; TNE 3893; TFE 1571

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

SECTION 16. - - - - - OTHER INFORMATION - - - - -

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